

Appln No. 09/640,479

Amdt date June 17, 2004

Reply to Office action of April 12, 2004

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) A vacuum fluorescent display comprising:

a pair of substrates and side glasses surrounding an evacuated envelope;

an electron emissive means for emitting electrons when a first negative potential is applied thereto;

a display means provided on one of the substrates in the evacuated envelope for receipt of a positive potential applied thereto, and for displaying a predetermined image in response to electrons emitted from the electron emissive means; and

an electron control means for generating a repulsive electric field when a second negative potential is applied thereto to ~~allow acceleration of~~ accelerate electrons emitted from the electron emissive means in the direction of the display means,

wherein the electron emissive means is located between the display means and electron control means and wherein the second negative potential is lower than the first negative potential.

2. (Previously Presented) The vacuum fluorescent display as recited in claim 1, wherein the electron control means is mounted on the substrate.

**Appln No. 09/640,479**

**Amdt date June 17, 2004**

**Reply to Office action of April 12, 2004**

3. (Cancelled)

4. (Original) The vacuum fluorescent display as recited in claim 2, wherein a negative potential is applied to the electron control means.

5. (Previously Presented) The vacuum fluorescent display as recited in claim 1, wherein the electron control means is a plurality of grids which are shaped as a mesh.

6. (Previously Presented) The vacuum fluorescent display as recited in claim 1, wherein the electron control means is a layer of a transparent electrically conductive material.

7. (Previously Presented) The vacuum fluorescent display as recited in claim 6, wherein the transparent electrically conductive material is tin doped indium oxide.

8. (Previously Presented) The vacuum fluorescent display as recited in claim 1, further comprising control electrode means, located near the electron emissive means, for control of trajectories of electrons emitted from the electron emissive means.

9. (Original) The vacuum fluorescent display as recited in claim 8, wherein either a positive or negative potential is applied to the control electrode means.

10. (Currently Amended) A method of producing an image on a vacuum fluorescent display, comprising:

Appln No. 09/640,479

Amdt date June 17, 2004

Reply to Office action of April 12, 2004

providing a vacuum fluorescent display having an evacuated envelope enclosed by two substrates and side glasses, a display means provided on one of the substrates in the evacuated envelope, an electron control means, and an electron emissive means located between the display means and electron control means;

applying a first negative potential to the electron emissive means to emit electrons;

applying a positive potential to the display means to attract the emitted electrons; and

applying a second negative potential to the electron control means to repel and accelerate the emitted electrons toward the display means, wherein the second negative potential is lower than the first negative potential.

11. (Original) The method of claim 10 wherein the vacuum fluorescent display further comprises a control electrode, the method further comprising applying a potential to the control electrode to control the trajectory of the emitted electrons.

12. (Currently Amended) A vacuum fluorescent display comprising:

a pair of substrates and side glasses surrounding an evacuated envelope;

a display provided on one of the substrates in the evacuated envelope;

an electron controller including a plurality of grids, to ~~allow repulsion and acceleration of~~ accelerate electrons toward

**Appln No. 09/640,479**

**Amdt date June 17, 2004**

**Reply to Office action of April 12, 2004**

the display when a second negative potential is applied thereto;  
and

an electron emitter located between the display and electron controller for emitting electrons when a first negative potential is applied thereto, wherein the second negative potential is lower than the first negative potential.

13. (Previously Presented) The vacuum fluorescent display as recited in claim 12, wherein the electron controller is mounted on the substrate.

14. (Previously Presented) The vacuum fluorescent display as recited in claim 12 wherein the electron controller is shaped as a mesh.

15. (Previously Presented) The vacuum fluorescent display as recited in claim 12, wherein the electron controller is a layer of a transparent electrically conductive material.

16. (Previously Presented) The vacuum fluorescent display as recited in claim 15, wherein the transparent electrically conductive material is tin doped indium oxide.

17. (Previously Presented) The vacuum fluorescent display as recited in claim 12, further comprising

a control electrode located near the electron emitter to control trajectories of emitted electrons.